

DERWENT-ACC-NO: \ 2000-355937

DERWENT-WEEK: 200235

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TITLE: High breakdown voltage diode for  
protection driver integrated circuit, has gate  
electrode formed on substrate surface via gate oxide film  
and is connected electrically to fourth area

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PATENT-ASSIGNEE: NEC CORP[NIDE]

PRIORITY-DATA: 1998JP-0288061 (October 9, 1998)

PATENT-FAMILY:

PUB-NO	PAGES	PUB-DATE	MAIN-IPC
JP 2000114266 A		April 21, 2000	N/A
006	H01L	021/329	
US 6384453 B1		May 7, 2002	N/A
000	H01L	023/62	
JP 3275850 B		April 22, 2002	N/A
008	H01L	021/329	

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-DESCRIPTOR	APPL-NO
JP2000114266A		N/A	
1998JP-0288061		October 9, 1998	
US 6384453B1		N/A	
1999US-0411364		October 4, 1999	
JP 3275850B		N/A	
1998JP-0288061		October 9, 1998	
JP 3275850B		Previous Publ.	JP2000114266
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INT-CL (IPC): H01L021/329, H01L023/62, H01L029/861

ABSTRACTED-PUB-NO: JP2000114266A

BASIC-ABSTRACT:

NOVELTY - High concentration N-diffused layer (5) is formed on surface of N-diffused layer (2) formed on P-type substrate (1). High concentration P-diffused layer (4) is formed on surface of P-diffused layer (3) formed adjoining the layer (2). A gate electrode (7) connected to layer (4), is formed on surface of substrate via a gate oxide film. Anode and cathode (9,8) are formed on layers (4,5), respectively.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for high breakdown voltage diode manufacturing method.

USE - Used for protection driver IC of plasma display panel, and for protection for IC for power supplies.

ADVANTAGE - The high voltage transistor can be protected reliably as manufacture of diode is simplified.

DESCRIPTION OF DRAWING(S) - The figure shows the sectional view of high breakdown voltage diode.

P-type substrate 1

N-diffused layer 2

P-diffused layers 3,4

High concentration N-diffused layer 5

Gate electrode 7

Cathode 8

Anode 9

EQUIVALENT-ABSTRACTS:

NOVELTY - High concentration N-diffused layer (5) is formed on surface of N-diffused layer (2) formed on P-type substrate (1). High concentration P-diffused layer (4) is formed on surface of P-diffused layer (3) formed adjoining the layer (2). A gate electrode (7) connected to layer (4), is formed on surface of substrate via a gate oxide film. Anode and cathode (9,8) are formed on layers (4,5), respectively.

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CHOSEN-DRAWING: Dwg.1/3